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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,287	02/20/2004	Ricardo Te Lim	VP113	7613
20178 7590 10/12/2007 EPSON RESEARCH AND DEVELOPMENT INC INTELLECTUAL PROPERTY DEPT 2580 ORCHARD PARKWAY, SUITE 225 SAN JOSE, CA 95131			EXAMINER HASSAN, AURANGZEB	
			ART UNIT 2182	PAPER NUMBER
			MAIL DATE 10/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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**Office Action Summary**

Application No.

10/783,287

Applicant(s)

LIM ET AL.

Examiner

Aurangzeb Hassan

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br/>Paper No(s)/Mail Date <u>8/17/07</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____</p> |
|---|--|

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1, 5, 9 and 13 are objected to because of the following informalities:

Change in claim 1, line 4 "an address" to "the address"; line 6 "an address" to "the address"; line 7 "a request" to "the request".

Change in claim 5, line 5, "an address" to "the address", line 6 "an address" to "the address"; line 7 "a request" to "the request".

Change in claim 9, lines 6 "an address" to "the address"; line 8 "an address" to "the address"; line 9 "a request" to "the request".

Change in claim 13, lines 8 "an address" to "the address"; line 10-11 "a request" to "the request".

Change for proper antecedent basis.

Appropriate clarification/correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Goodwin et al. (US Patent Number 5,371,870 hereinafter “Goodwin”).

4. As per claims 1, 5, 9, and 13, Goodwin teaches a method, apparatus, medium, and system comprising: receiving a plurality of requests, each of the plurality of requests specifying an address (memory requests by CPU for sequential locations within a range, column 4, lines 3 – 38);

determining if an address corresponding with one of the plurality of requests is within the range of multiple addresses (it is determined whether the memory references are available in the buffer and then checked from the memory, it is already set that the request is within a range of address, column 4, lines 39 – 67, column 5, lines 1 – 8); and

causing a memory to be accessed whenever an address corresponding with a request is within the range of multiple addresses (memory request cache handling further elaborated in column 5, lines 9 - 61), the memory being identified by and accessible only through a single address, whereby the memory is accessed using any one of the addresses in the range of multiple addresses (memory 18 is direct mapped such that only one cache location is available for a given index number, column 5, lines 1 – 8).

5. As per claims 2, 6 and 10 Goodwin teaches a method, apparatus, medium, and system further comprising sending the plurality of request in a sequence, wherein the address corresponding with each successive request in the sequence is a successive

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address in the range of multiple addresses (when subsequent request corresponds to a sequential address deemed a stream, column 4, lines 3 – 38).

6. As per claims 3, 4, 7, 8, 11, 12, 15 and 16 Goodwin teaches a method, apparatus, medium and system wherein the memory access includes reading from the memory and writing to the memory (read and write requests seen in figure 2).

7. As per claim 14, 17, 18 and 20, Goodwin teaches a method and device wherein the memory is a first-in-first-out memory (FIFO, column 2, lines 47 – 67).

8. As per claim 19, Goodwin teaches an apparatus wherein the apparatus is coupled with a bus, and the range of multiple addresses is predetermined and a subset of the set of addresses that may be placed on the bus (the range of addresses is set as predetermined by the maximum available addressing limited by the main memory, element 12, figure 1 and validation is expressed in figure 7).

### ***Response to Arguments***

9. Applicant's arguments filed 7/3/2007 have been fully considered but they are not persuasive. The Applicant argues that none of the independent claims recite granting a memory request in a single access as cited by the prior art, therefore does not read on the claims.

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10. As per the Applicant's argument the Examiner respectfully disagrees. The Examiner notes that Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

**The Applicant did not point out any deficiencies in the reference and merely stated elements that the claims do not recite.**

Assuming arguendo, the Examiner notes that the prior art teaches limitations of a memory being accessed and the memory being identified by and accessible only through a single address as seen in the rejection in view of Goodwin above. The section comprising column 5, lines 9 – 61 was cited for elaboration on the memory request handling and how Goodwin directly maps a single address access. The Applicant is respectfully directed to the preceding paragraph column 5, lines 1 – 8 to better understand the structure of the memory and how it is directly mapped such that only one cache location is available for a given index number. One of ordinary skill in the art would clearly see that Goodwin accesses a memory location utilizing the single address associated with it.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

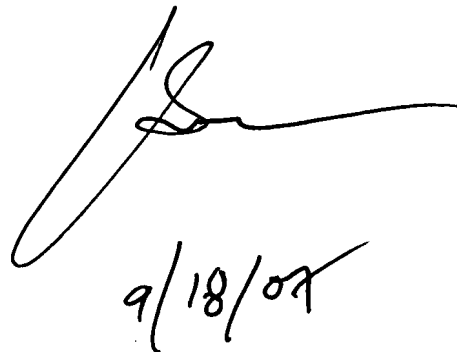
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aurangzeb Hassan whose telephone number is (571) 272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH

A handwritten signature in black ink, followed by the date 9/18/07 written in a similar cursive style.

KIM HUYNH  
SUPERVISORY PATENT EXAMINER